



Overload relay 1...4 A Electronic For motor protection Size S0, Class 5...30
 Contactor mounting Main circuit: Screw Auxiliary circuit: Screw Manual-Automatic-
 Reset Internal ground fault detection

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| product brand name | SIRIUS |
| product designation | solid-state overload relay |
| product type designation | 3RB3 |
| General technical data | |
| size of overload relay | S0 |
| size of contactor can be combined company-specific | S0 |
| power loss [W] for rated value of the current at AC in hot operating state | 0.1 W |
| • per pole | 0.03 W |
| insulation voltage with degree of pollution 3 at AC rated value | 690 V |
| surge voltage resistance rated value | 6 kV |
| maximum permissible voltage for protective separation | |
| • in networks with ungrounded star point between auxiliary and auxiliary circuit | 300 V |
| • in networks with grounded star point between auxiliary and auxiliary circuit | 300 V |
| • in networks with ungrounded star point between main and auxiliary circuit | 600 V |
| • in networks with grounded star point between main and auxiliary circuit | 690 V |
| shock resistance | 15g / 11 ms |
| • according to IEC 60068-2-27 | 15g / 11 ms; Signaling contact 97 / 98 in position "Tripped": 9g / 11 ms |
| thermal current | 4 A |
| reference code according to IEC 81346-2 | F |
| Substance Prohibitance (Date) | 10/01/2009 |
| SVHC substance name | Lead monoxide (lead oxide) - 1317-36-8 |
| Ambient conditions | |
| installation altitude at height above sea level maximum | 2 000 m |
| ambient temperature | |
| • during operation | -25 ... +60 °C |
| • during storage | -40 ... +80 °C |
| • during transport | -40 ... +80 °C |
| temperature compensation | -25 ... +60 °C |
| relative humidity during operation | 10 ... 95 % |
| Main circuit | |
| number of poles for main current circuit | 3 |
| adjustable current response value current of the current-dependent overload release | 1 ... 4 A |
| operating voltage | |
| • rated value | 690 V |
| • for remote-reset function at DC | 24 V |
| • at AC-3e rated value maximum | 690 V |

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| operating frequency rated value | 50 ... 60 Hz |
| operational current rated value | 4 A |
| operational current at AC-3e at 400 V rated value | 4 A |
| operating power | |
| • for 3-phase motors at 400 V at 50 Hz | 0.37 ... 1.5 kW |
| • for AC motors at 500 V at 50 Hz | 0.37 ... 2.2 kW |
| • for AC motors at 690 V at 50 Hz | 0.55 ... 3 kW |
| Auxiliary circuit | |
| design of the auxiliary switch | integrated |
| number of NC contacts for auxiliary contacts | 1 |
| • note | for contactor disconnection |
| number of NO contacts for auxiliary contacts | 1 |
| • note | for message "tripped" |
| number of CO contacts for auxiliary contacts | 0 |
| operational current of auxiliary contacts at AC-15 | |
| • at 24 V | 4 A |
| • at 110 V | 4 A |
| • at 120 V | 4 A |
| • at 125 V | 4 A |
| • at 230 V | 3 A |
| operational current of auxiliary contacts at DC-13 | |
| • at 24 V | 2 A |
| • at 60 V | 0.55 A |
| • at 110 V | 0.3 A |
| • at 125 V | 0.3 A |
| • at 220 V | 0.11 A |
| Protective and monitoring functions | |
| trip class | CLASS 5E, 10E, 20E and 30E adjustable |
| design of the overload release | electronic |
| response value current of the grounding protection minimum | 0.75 x IMotor |
| response time of the grounding protection in settled state | 1 000 ms |
| operating range of the grounding protection relating to current set value | |
| • minimum | IMotor > lower current setting value |
| • maximum | IMotor < upper current setting value x 3.5 |
| UL/CSA ratings | |
| full-load current (FLA) for 3-phase AC motor | |
| • at 480 V rated value | 4 A |
| • at 600 V rated value | 4 A |
| contact rating of auxiliary contacts according to UL | B600 / R300 |
| Short-circuit protection | |
| design of the fuse link | |
| • for short-circuit protection of the main circuit | |
| — with type of coordination 1 required | gG: 35 A, RK5: 15 A |
| — with type of assignment 2 required | gG: 20 A |
| • for short-circuit protection of the auxiliary switch required | fuse gG: 6 A |
| Installation/ mounting/ dimensions | |
| mounting position | any |
| fastening method | Contacting mounting |
| height | 87 mm |
| width | 45 mm |
| depth | 84 mm |
| Connections/ Terminals | |
| product component removable terminal for auxiliary and control circuit | Yes |
| type of electrical connection | |
| • for main current circuit | screw-type terminals |
| • for auxiliary and control circuit | screw-type terminals |
| arrangement of electrical connectors for main current circuit | Top and bottom |
| type of connectable conductor cross-sections for main contacts | |

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| <ul style="list-style-type: none"> • solid • stranded • solid or stranded • finely stranded with core end processing | <p>2x (1 ... 2.5 mm²), 2x (2.5 ... 10 mm²)</p> <p>2x 10 mm²</p> <p>1x (1 ... 10 mm²), 2x (1 ... 10 mm²)</p> <p>1x (1 ... 6 mm²), 2 x (1 ... 6 mm²), 1x 10 mm²</p> |
| type of connectable conductor cross-sections <ul style="list-style-type: none"> • for auxiliary contacts <ul style="list-style-type: none"> — solid — solid or stranded — finely stranded with core end processing • for AWG cables for auxiliary contacts | <p>1x (0.5 ... 4 mm²), 2x (0.5 ... 2.5 mm²)</p> <p>1x (0,5 ... 4 mm²), 2x (0,5 ... 2,5 mm²)</p> <p>1x (0.5 ... 2.5 mm²), 2x (0.5 ... 1.5 mm²)</p> <p>1x (20 ... 14), 2x (20 ... 14)</p> |
| tightening torque <ul style="list-style-type: none"> • for main contacts with screw-type terminals • for auxiliary contacts with screw-type terminals | <p>2 ... 2.5 N·m</p> <p>0.8 ... 1.2 N·m</p> |
| design of screwdriver shaft | Diameter 5 to 6 mm |
| size of the screwdriver tip | Pozidriv PZ 2 |
| design of the thread of the connection screw <ul style="list-style-type: none"> • for main contacts • of the auxiliary and control contacts | <p>M4</p> <p>M3</p> |

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| Electrical Safety | |
| protection class IP on the front according to IEC 60529 | IP20 |
| touch protection on the front according to IEC 60529 | finger-safe, for vertical contact from the front |
| Communication/ Protocol | |
| type of voltage supply via input/output link master | No |

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| Electromagnetic compatibility | |
| conducted interference <ul style="list-style-type: none"> • due to burst according to IEC 61000-4-4 • due to conductor-earth surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-5 • due to high-frequency radiation according to IEC 61000-4-6 | <p>2 kV (power ports), 1 kV (signal ports) corresponds to degree of severity 3</p> <p>2 kV (line to earth) corresponds to degree of severity 3</p> <p>1 kV (line to line) corresponds to degree of severity 3</p> <p>10 V in frequency range 0.15 to 80 MHz, modulation 80 % AM with 1 kHz</p> |
| field-based interference according to IEC 61000-4-3 | 10 V/m |
| electrostatic discharge according to IEC 61000-4-2 | 6 kV contact discharge / 8 kV air discharge |

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| Display | |
| display version for switching status | Slide switch |
| Approvals Certificates | |

General Product Approval



[Confirmation](#)



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|------------|---------------------------------------|--------------------------|--------------------------|
| EMV | For use in hazardous locations | Test Certificates | Marine / Shipping |
|------------|---------------------------------------|--------------------------|--------------------------|



[KC](#)



[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



| | |
|--------------------------|--------------|
| Marine / Shipping | other |
|--------------------------|--------------|



[Confirmation](#)

Environment

Further information

Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

Information- and Downloadcenter (Catalogs, Brochures,...)

<https://www.siemens.com/ic10>

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RB3123-4PB0>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RB3123-4PB0>

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3RB3123-4PB0>

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

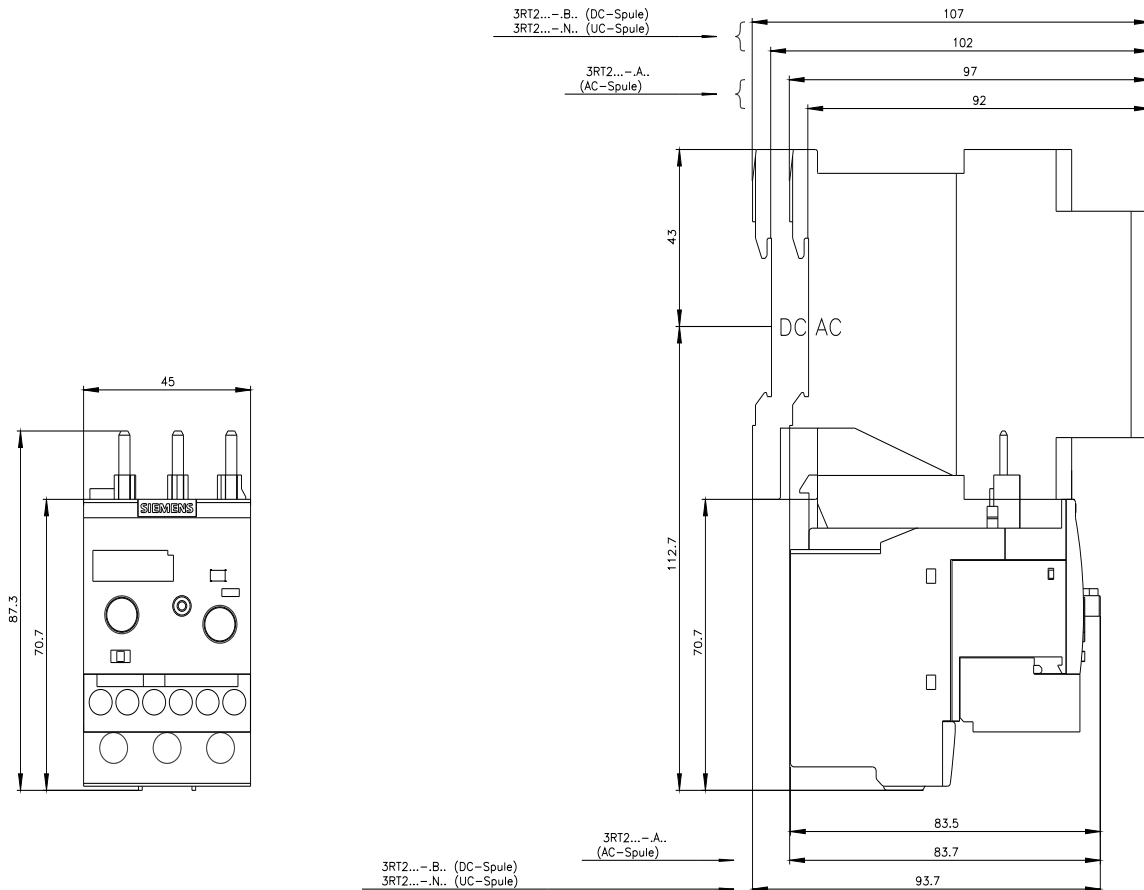
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RB3123-4PB0&lang=en

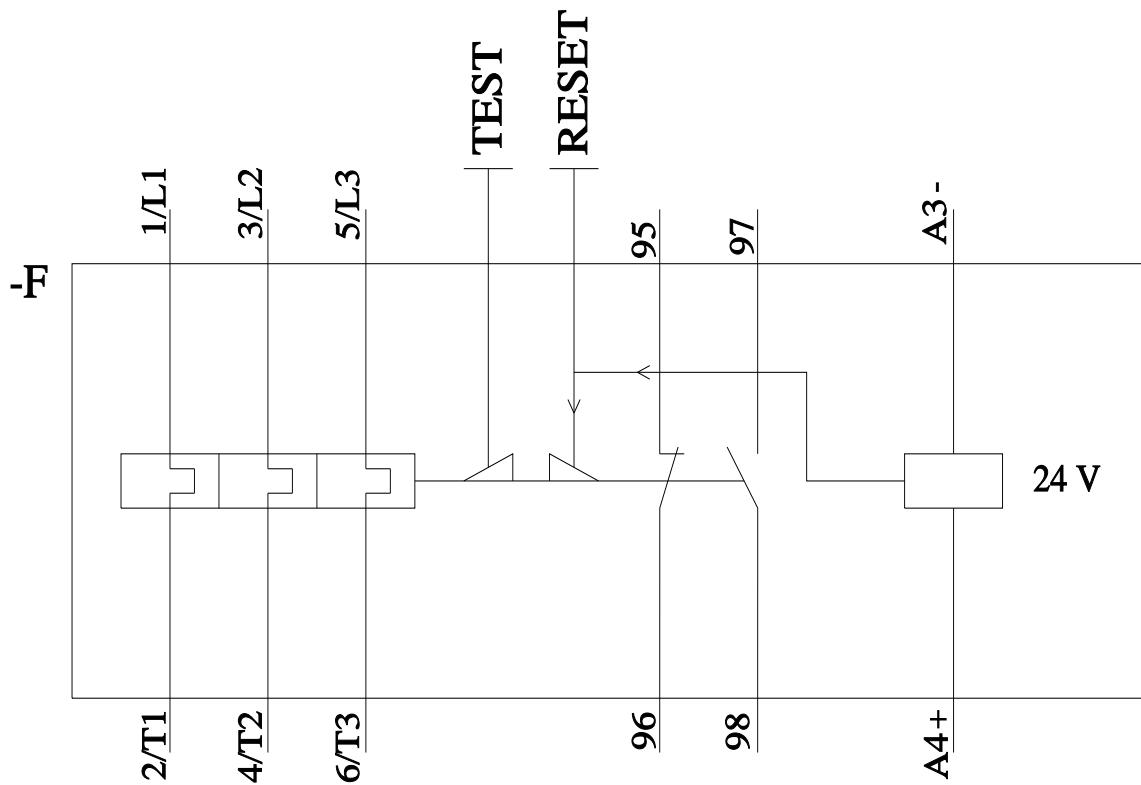
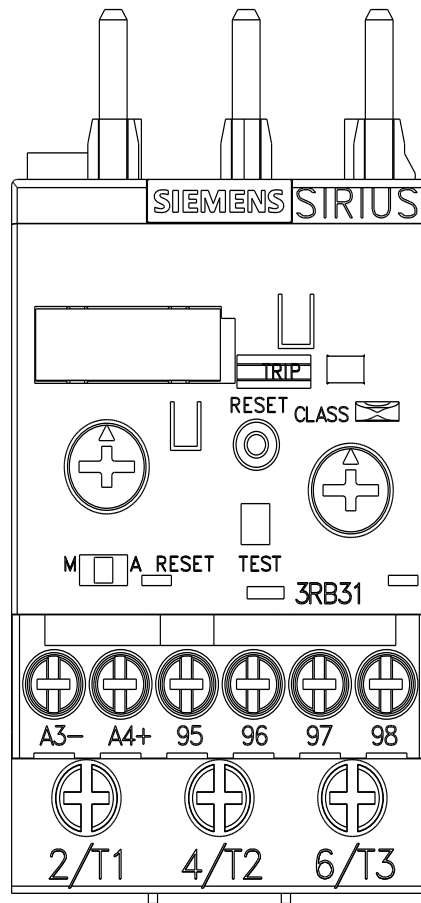
Characteristic: Tripping characteristics, I_t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RB3123-4PB0/char>

Further characteristics (e.g. electrical endurance, switching frequency)

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RB3123-4PB0&objecttype=14&gridview=view1>





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3/11/2024 